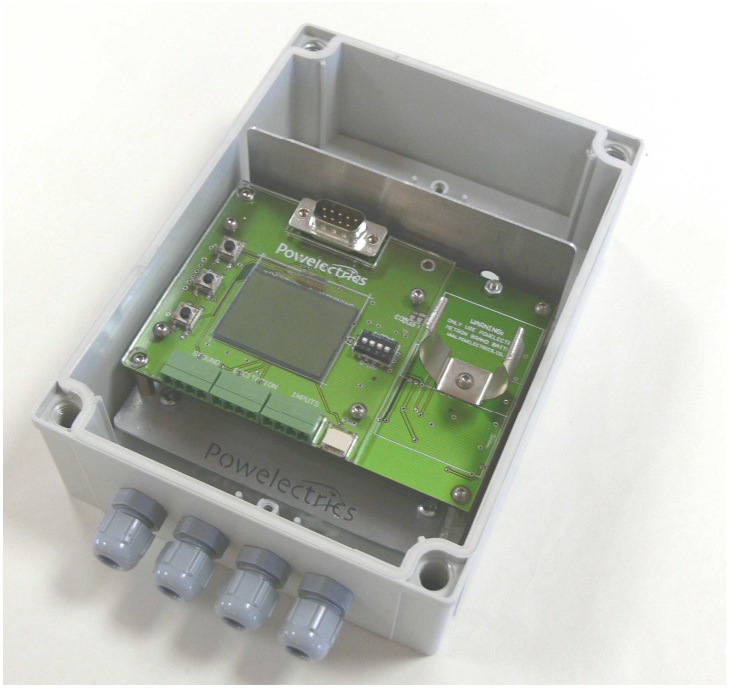
IN4MA Metron D

GSM/GPRS Telemetry Solution

Technical Manual and Specification

Revision 0.2.1

17th April 2008



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DOCUMENT HISTORY

Version	Date	Comments
0.1	12/09/07	First release
0.2	24/09/07	Second Release, inc remote programming guide
0.2.1	17/04/08	Corrected oli.3. programming format – settle -> 1 (was 0)

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WARNINGS

Safety

Read carefully these instructions and notes before powering IN4MA Metron. For each situation please follow the specific instructions.

The Metron is a low power radio transmitter and receiver. When it is powered, it will send and receive radio frequency (RF) signals.

Operating the Metron close to other electrical equipment such as television, phone, radios and personal computer, may cause interference.

Interference

The Metron, like all wireless devices, is subject to interferences that may reduce its performance.

Road Safety

Do not use the Metron while driving. In case of use on cars, it is necessary to check that electronic equipment is shielded against RF signal. Do not place the Metron over the air bag or in the air bag deployment area.

Hospital Safety

Do not use the Metron near health equipment, especially pacemaker and hearing aids, to avoid potential interferences. The Metron is a not mobile phone; do not use it in direct contact with the human body. Switch it off in hospitals, and in any other type of medical centre. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Explosive Materials

Do not use the Metron in refueling points, near fuel or chemicals. Do not use the Metron where blasting is in progress. Observe restrictions, and follow any regulation or instruction.

Do not use the Metron in direct contact with the human body; do not touch the antenna if not necessary when the Metron is powered. Use approved accessories and batteries only. Do not connect incompatible products.

Included Battery

- Do not use if the battery casing appears damaged
- Do not attempt to recharge the battery
- Do not short circuit
- Only use supplied battery with the IN4MA Metron

Replacing the Battery

The battery used in the Metron must be supplied by Powelectrics Ltd. Its warranty will be void if any other battery is used as it may damage the Metron or cause it to malfunction.

To remove the battery, simply remove the plug from the PWR socket – Do not pull on the connecting wires. The battery can now be easily pulled from the retaining clip. Push the new battery into the retaining clip centrally, and then reconnect the plug to the socket on the Metron board.

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OVERVIEW

This document describes all the functions, features and interfaces of the IN4MA Metron telemetry device.

Applications

A few of the applications that this device has been designed for include:

- Meter Reading
- Condition Monitoring
- Alarm Reporting

Summary of Technical Features

- Ability to interface with up to four 0-10V digital inputs
- On-board wetting voltage
- Typically > 5 year battery life
- LCD Display to help with on-site setup
- Tri-band operation

As the Metron is a battery powered device it has been designed in such a way to extend this life to a maximum. This means during normal operation the display will be off, the sensors excitation will be off and the GSM engine will be powered down. As required these are switched on by the processor and when finished with they are switched off.

GENERAL DECRIPTION OF OPERATION

NAVIGATION BASICS

A common method is used throughout the menu system for navigation.

To move up within a menu – You must use the top button to the left of the screen (*UP*) to move up if you are navigating in a menu.

To move down within a menu – You must use the bottom button to the left of the screen (*DOWN*) to move down if you are navigating within a menu.

To select an item on a menu – You must press the central button to the left of the screen (*ENTER*) for less than one second to select an item if you are within a menu.

To go to the previous menu – You must press the central button to the left of the screen for more than one second to return to the previous menu. You should continue to hold until the previous menu appears.

To return to the previous menu when displaying information – If the Metron is just displaying information, you can return to the previous menu by simply pressing the central button to the left of the screen briefly.

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GETTING STARTED

What you will need:

A large Phillips screwdriver

A 3mm Allen driver

A SIM card with the ability to send and receive text messages

A device that can send and receive specified text messages

The latest version of the Metron configuration tool

1. Open the packaging

Cut the seals from the box and open the cardboard lid

2. Remove the lid

Using a large Phillips screwdriver, remove the four screws fastening the plastic lid to the enclosure and remove the lid

3. Fit the SIM card

Using the Allen driver, remove the four outer screws from the circuit board and tilt the circuit board 90 degrees to the right

Carefully remove the antenna cable from the circuit board – do not use excessive force.

Slide the SIM card into the SIM card holder. The final position is drawn onto the circuit board.

Re-attach the antenna cable and fasten the circuit board using the four outer screws.

4. Power up the unit

Place the battery into the clip and connect the power connector.

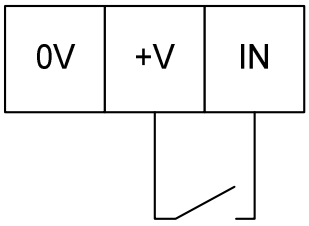
5. Program the unit

Follow the instructions for configuration that are stated later in this manual.

6. Connect inputs & test

For each input that you have programmed, connect the required sensor and navigate to the relevant input settings. Choose the 'Read Now' option to see a real time reading from the sensor.

Volt free contact connections



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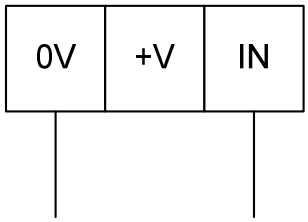
0-10 Volt DC input from external source



7. Put the Metron to sleep Return to the main menu then press and hold the central button until it displays ‘Sleeping..’. The Metron will now be operational.

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CONNECTIONS

Serial Debug Port

This port is for internal use at Powelectrics only.

PWR

This socket should only be used for connecting the battery to the board. It is polarised – It should be impossible to connect the power incorrectly. Ensure that a secure connection is made. When you remove the connector, do not pull using the wires as this may impair the electrical connection.

DIL Switch

Each of the 4 (labelled 1, 2, 3 and 4) switches in this bank should always be set to 0-10V for the Metron-D. The bottom position is 0-10V, while the top position is 4-20mA. If the input is not enabled, it does not matter which position the corresponding switch is set to.

INPUT 1, 2, 3 and 4

Each sensor or connected input has its own plug and corresponding socket. On each socket, three connections are available.

INPUT 1			INPUT 2			INPUT 3			INPUT 4		
0V	+V	IN	0V	+V	IN	0V	+V	IN	0V	+V	IN

0V

This is the 0V / -Ve connection for the channel, although they are all common to each other.

+V

This will provide the wetting voltage to the channel. It is important that the load on this does not exceed the specifications.

IN

This is the input for the channel – This will accept any input from 0-10V.

Note: It is important that the channel used for the sensor excitation and the sensor inputs are the same. The connection to ground is not channel dependant.

PUSHBUTTONS

These are used in conjunction with the display in order to access and navigate the menu system.

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INSTALLATION

The Metron comes pre-assembled with the appropriate battery fitted, but not connected.

To achieve optimum performance from the unit, it is advised that the following guidelines are followed during the installation:

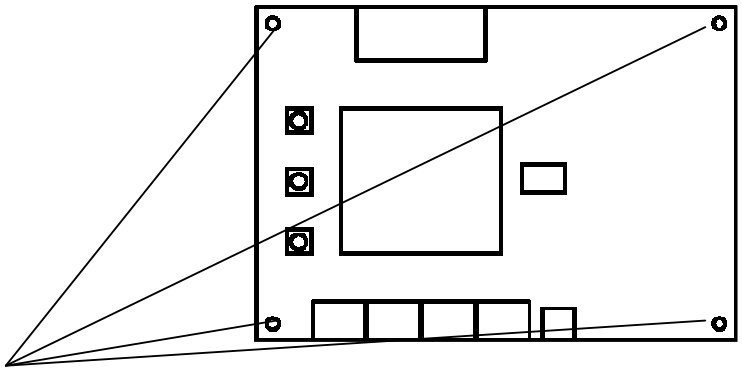
- To achieve optimum signal strength, the Metron must be mounted upright, with the label reading the correct way up
- Large metal objects that are in the transmission path of the Metron may hinder the performance
- Check that the glands are tightened and any blanking plugs are fitted tightly. The inside of the unit must remain dry, as water ingress may damage the Metron.

ANTENNA

The Metron comes with an antenna attached. The system has been designed to gain optimum signal strength to the mobile phone network but it is possible to use an external antenna. The Metron presents an SMA type connector for the antenna and the cable can be connected into the enclosure via one of the glands.

SIM CARD

The SIM card holder is located beneath the circuit board and can only be accessed by removing the circuit board. The circuit board is removed by unscrewing the 4 outer Alan screws. These screws need to be removed in order to gain access to the SIM card holder. When removing the circuit board, remove the antenna cable carefully with a firm grip.



Check with your GSM provider if your SIM is enabled for data and fax traffic, if not ask them for this service, they will give you other two numbers (one for data calls and the other for fax calls). If you are using ‘pay as you go’ ensure that you have credit on your SIM, and that you do not have a minimum usage to maintain operation.

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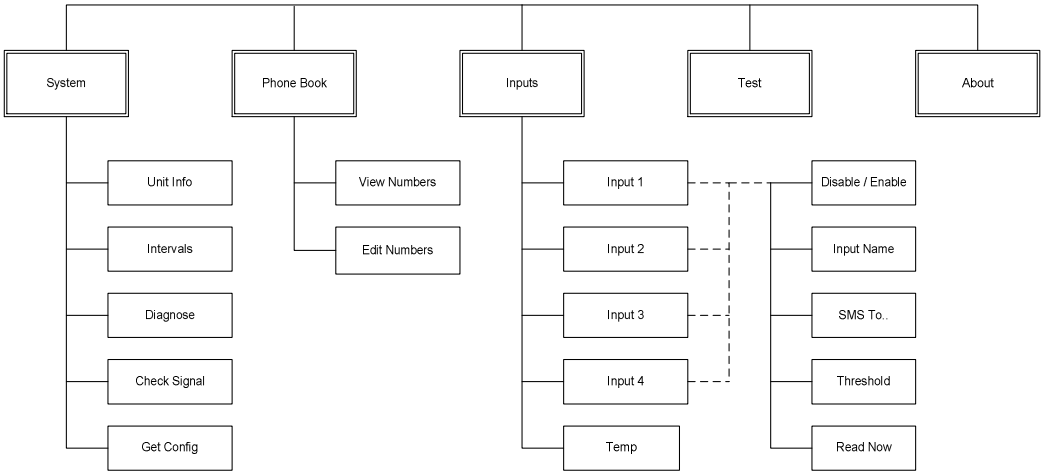
THE MENU STRUCTURE

Below is a diagram of how the menu system is structured. Each menu item has its function described in the table below the diagram.



Menu Item	Function
Unit Info	Displays the Unit Name and the Firmware Version. The firmware version may be requested if you contact Powelectrics for support.
Intervals	Displays the transmit interval.
Diagnose	A self diagnostic function that allows the user to determine if there are any problems and where they may lie. For each of the checks, it will return 'Pass' or 'Fail'. SIM: This checks to see if the SIM card is present and if the SIM card has PIN protection. REG: This checks for correct network registration. If it is on the home network or on a roaming network and is connected correctly, it will return 'Pass'. SIG: This checks the signal strength and returns 'Pass' if the signal is strong enough for the Metron to operate reliably. IMEI #: The IMEI number is displayed for your reference.
Check Signal	This feature logs onto the network and monitors the signal strength. It displays the signal (0 – 31 or 99) and an interpretation of this so you can evaluate if the signal will be adequate or not. No Signal: There is extremely little or no signal available to the Metron. It will be unable to operate in these circumstances. Very Poor: There is a poor signal available to the Metron and the ability to operate successfully may vary according to weather conditions. Marginal: There is a signal available that can generally allow reliable

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	operation of the Metron. Signal OK: The signal is well above operational levels. Excellent: The signal is very good – optimum conditions for successful Metron operation. Note: If you do not have a SIM card present in the Metron, this function will still operate but instead will read the signal strength of the strongest operator signal present.
Get Config	To configure the Metron via text message, you must first put the Metron into configuration mode. By selecting 'Get Config', it will do this and interpret any text messages that are received.
View Numbers	When selecting 'View Numbers', it will display the four numbers that are present in the Metron phonebook. If a number has not been programmed, it will show 'No Number' by the corresponding entry.
Edit Numbers	When selecting 'Edit Numbers', it will present each of the four phone number spaces in turn in a way that allows you to edit them. Use the up and down keys to change the numbers in turn. The character '>' will terminate character entry.
Input 1, 2, 3, 4	When selecting any of the inputs, it will bring up a sub-menu that directly corresponds to the input that has been selected.
Disable/Enable	By choosing this option, it will enable or disable the input alternately. A confirmation message will follow.
Input Name	This will display the name that has been given to the input. This name can be edited by using the up and down keys to change the characters in turn. The character '>' will terminate character entry. It will also confirm that the input is enabled.
SMS To..	This displays which phone numbers will be sent a text message when the corresponding input is triggered. Each can be edited by using the up and down keys to change between 'yes' and 'no'. Pressing the enter key will confirm the selection and move to the next phone number entry.
Threshold	The threshold menu displays the point at which an alarm will be triggered. This threshold is set in Volts. Use the up and down keys to change the value, pressing enter to confirm your selection. The alarm can be triggered on: - Going from above the threshold to below the threshold (high to low) - Going from below the threshold to above the threshold (low to high) - Both of the above Using the up and down keys will change between these options. Pressing the enter key will confirm the selection.
Read Now	This allows real time monitoring in an oscilloscope style format – The scaled value (in Volts) is displayed in the upper left hand corner, followed by the state (High or Low) in brackets. This can be useful for resolving and testing input issues.
Temp	This will display the temperature of the current environment.
Test	This displays the voltage and state of each input

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CONFIGURATION

The Metron D can be configured in one of two ways:

- Locally, using the LCD screen and buttons
- Remotely, by sending commands to the Metron via text message

Each of these methods is described individually. It is recommended that the local programming procedure is followed for initial setup.

LOCAL PROGRAMMING

The Metron D has the following configurable options:

- Node name – This is the unique identifier that identified the Metron D. This name is used at the top of each text message sent.
- Transmit Interval – This is the length of time (in minutes) between each log transmission. This transmission contains the state of each input.
- Phone numbers 1, 2, 3, 4 – These are the phone numbers that the Metron D is capable of sending a text message to
- For each input:
    - Enable / Disable input
    - Input Name – used to identify the input
    - A choice of which phone book entries to text message
    - Trigger threshold
    - Trigger condition

Step #1 – System Settings

The System settings consist of the Node name and transmit interval.

Firstly, select ‘System’ from the main menu, then choose ‘Unit Info’. You will be prompted with the Node name and the firmware version. Using the up and down keys select the desired character, then press enter to confirm and move to the next character. Repeat this process until you have entered the desired Node name. Select the ‘>’ character to terminate the Node name.

The transmit interval can be altered by selecting ‘System’ from the main menu, then choosing ‘Transmit Interval’. Using the up and down keys, increase or decrease the desired transmit interval. Press the enter key to confirm the transmit interval.

Step #2 – Programming the phone book

The phone book contains the numbers that the Metron D is capable of text messaging. Each of these numbers must be entered in full, including the country code e.g. +441234567890.

To program the phone book select ‘Phonebook’ from the main menu followed by selecting the ‘Edit Numbers’ option. It will default to editing the first phone number entry, with the first character shown being either ‘+’ or the ‘No number’ option. Using the up and down keys,

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change each digit in turn followed by the enter key to confirm your selection. Select the '>' character to terminate each phone number.

Step #3 – Configuring the inputs

For each input, the same series of configurable options are available: Input name, which phone book entries to text message, trigger threshold and trigger condition.

Firstly, you must select the input that you wish to configure. Select 'Inputs' from the main menu followed by the input number that you wish to select.

To enable the input, select the 'enable' option from the menu. Confirmation of the enabled input will then be displayed.

To rename the input, select 'Input Name' from the menu. Using the up and down keys, change each character in turn followed by the enter key to confirm your selection. Select the '>' character to terminate the name.

To change which phone numbers will be sent a text message when the corresponding input is triggered, select 'SMS to..' from the menu. Each can be edited by using the up and down keys to change between 'yes' and 'no'. Pressing the enter key will confirm the selection and move to the next phone number entry.

To change the threshold and trigger state, select 'Threshold' from the menu. To adjust the trigger threshold displayed, use the up and down keys to set the threshold followed by the enter key to confirm the selection. To adjust the trigger state, use the up and down keys to select the mode you wish, followed by the enter key to confirm the selection.

Step #4 – Testing the Inputs

For each input, it is advisable to test the sensor prior to placing the Metron D into the sleeping state. To test, go to 'Inputs' from the main menu followed by the appropriate input you would like to test. Then select the 'read now' option.

A live graph will be displayed of the corresponding input. Above this graph is the current voltage and the state (dependant on threshold).

Step #5 – Placing the Metron D into run mode

The Metron D 'runs' when it is placed into a sleeping state. To achieve this, press and hold the enter key until 'Sleeping..' is displayed on the screen. The inputs are then continually monitored for change. Upon a threshold being crossed, the Metron D will power up and send a text message to the appropriate phone book entries.

REMOTE PROGRAMMING

The Metron D can be remotely programmed by sending commands via text message. Each of these commands must be sent separately. The formatting of each command is described in detail in the section *Programming Specification.*

To receive the commands, Press the (ENTER) button to 'wake up' the Metron, go to 'System' and then go to 'Get Config'. The display should read 'Waiting for Messages..' after it has

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established You must wait until each of the text messages sent has been received and successfully interpreted – It will display ‘Success’ or ‘Invalid Command’ in each case.

When all the messages have been received, press and hold the central button until you are returned to the main menu. If you leave the unit unattended for several minutes it will go into sleep mode.

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Example #1

Real Time Security Monitoring

A PIR sensor has a volt free contact available – When the PIR senses movement, the metron must immediately pick up the contact and send an alarming message.

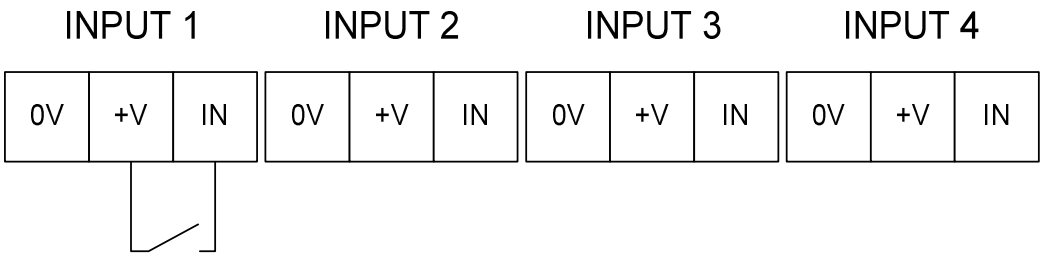
Requirements:

- Must alarm to one number
- It should send a regular log once a day
- It must check the signal more than 4 times a second

Configuration:

We will use +447771111111 in our example. +447771111111 will be used to receive any alarms that are triggered.

The contact is wired to input one as shown in the diagram below



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Example #1 Settings

Entry	Value	Notes
Phone Number 1	+447771111111	Phone Number 1 is always the number that will be transmitted to upon a transmit interval.
Phone Number 2	Leave blank	
Phone Number 3	Leave blank	
Phone Number 4	Leave blank	

Entry	Value	Notes
Unit Name	house_alarm	
Transmit Interval	1440	0 = Do not transmit upon interval

Parameter	Input 1	Input 2	Input 3	Input 4	Notes
Input Name	PIR_1				
Trigger condition	0				
Threshold	15				
Phone Number 1	Yes				
Phone Number 2	No				
Phone Number 3	No				
Phone Number 4	No				

Notes:

The threshold is set at 15, so it will be triggered when input one rises above 1.5V

Generated Text Messages

```
oli.1.+447771111111.

oli.2.house_alarm.1440.0.0.0.

oli.3.1.PIR_1.0.0.0.0.101.0.0.0.15.0.1.0.0.0.
```

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SPECIFICATION

General:	Number of Channels:	4
	Battery Life:	Typically > 5 Years
	Battery Included:	Yes
	Connectors:	3 Pin 3.81mm Pitch / Sensor
		SMA Antenna Connector
		2.54mm Molex Power Connector
		9 Way D-Type Male (internal use only)
	Warranty:	12 Months RTB
Form Factor:	Enclosure:	IP67 Rated, Polycarbonate
	Dimensions:	180 x 130 x 76 (mm)
	Weight:	~ 0.7 Kg
Electrical:	Operating Frequency:	900/1800/1900Mhz
	Supply:	3.6V @ 0.5A
	Excitation Supply:	~ 3.6V @ < 0.5A / ~ 21V @ < 120mA
	Load (Sleep):	~ 50µA
	Load (Active):	~ 6mA
	Load (Modem):	~ 12 – 250mA
	Input Impedance:	33KΩ (0-10V)
		XXXΩ (4-20mA)
	Input Tolerance:	
	Resolution:	10 bit (1024 Increments)
Environmental:	Temperature:	-15 to +45 ºC
	Humidity:	20 to 80% non-condensing

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IN4MA Metron D

GSM/GPRS Telemetry Solution

Programming Specification

12th September 2007

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Important points to note

- Valid characters are **0-9**, **a-z**, **A-Z**, **+**, **-**, _ and **.**
- Spaces are allowed but not recommended (they are ambiguous), use _ instead
- All text messages and names are case insensitive.
- **.** is used as the separator, and is also used to end the command.
- The Metron does not use phone number identification as an authorisation method. The security for the Metron is a single three digit password.

The text message format

The format of a text message to program the Metron is shown below. [and] are not literal characters, they enclose a description of what is expected. There may be more than one parameter, but this is dependant on the command being issued.

`[password].[command number].[parameters].`

Every text message sent to the Metron will only be processed if it begins with the correct three digit password. If this is not the case, no action will be taken. *The default password is 'oli'.* The command numbers are as followed.

Command Number	Description
1	This is used to program the phone book
2	This is used to configure the system settings
3	This is used to configure the inputs
4	This is used to change the password
5	This is used to reset the system to factory settings
6	This is used to request the configuration and status

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Command Number 1 – Programming the phone book

Description

This command will set up to four of the phone book entries on the Metron.

Format

`[password].1.[phonenumber1].[phonenumber2].[phonenumber3].[phonenumber4].`

Example text message

`oli.1.+447712345671.+447712345672.+447712345673.+447712345674.`

Parameters

Parameter	Description	Limitations
Phone number	The phone number of a device to transmit to	The phone numbers can be up to 13 digits in length, including '+'

Notes

You must include the country code e.g. +44.

If you need to set fewer than four phone book entries, use the same format but omit the desired numbers. For example:

`oli.1.+447712345671.+447712345672.`

The numbers are programmed into the phonebook in order

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Command Number 2 – Configuration of the system settings

Description

This command will configure the system settings on the Metron.

Format

```
[password].2.[unit name].[transmit interval].0.0.0.
```

Example text message

```
oli.2.pump_house.1440.0.0.0.
```

Parameters

Parameter	Description	Limitations
Unit name	A unique name that identifies the particular Metron	This cannot be more than 20 digits in length
Transmit Interval	How frequently the unit will wake up and transmit readings from the sensors. This will transmit to phone number 1. (Minutes)	This must be between 0 and 65536 Minutes 0 = Do not wake up and send log

Notes

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Command Number 3 – Configuration of the Inputs

Description

This command will configure the inputs on the Metron

Format

`[password].3.[input number].[input name].1.0.0.0.101.0.0.[trigger condition].[threshold].0.[phone1 enable].[phone2 enable].[phone3 enable].[phone4 enable].`

Example text message

`oli.3.1.pump_1.1.0.0.0.101.0.0.0.50.0.1.1.1.1.`

Parameters

Parameter	Description	Limitations
Input number	The number of the input that you want to configure	Must be 1, 2, 3 or 4
Input name	A name to identify the input	This cannot be more than 20 digits in length
Trigger Condition	This configures the conditions upon which the input is triggered	0 = Low to High 1 = High to Low 2 = Both
Threshold	This is the alarm threshold. When the sensor value rises above this, an alarm will be sent	Must be between 0 and 100. 0 = 0V 100 = 10V
Phone1 enable	If phone number 1 should be alarmed to upon an alarm threshold being broken.	Boolean – Must be 1 (enabled) or 0 (disabled) 0 = Do not text phone number 1 upon alarm 1 = Do text phone number 1 upon alarm
Phone2 enable	If phone number 2 should be alarmed to upon an alarm threshold being broken.	Boolean – Must be 1 (enabled) or 0 (disabled) 0 = Do not text phone number 2 upon alarm 1 = Do text phone number 2 upon alarm
Phone3 enable	If phone number 3 should be alarmed to upon an alarm threshold being broken.	Boolean – Must be 1 (enabled) or 0 (disabled) 0 = Do not text phone number 3 upon alarm

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		1 = Do text phone number 3 upon alarm
Phone4 enable	If phone number 4 should be alarmed to upon an alarm threshold being broken.	Boolean – Must be 1 (enabled) or 0 (disabled) 0 = Do not text phone number 4 upon alarm 1 = Do text phone number 4 upon alarm

Notes

You will need to send a single instance of this command for each input you would like to program (specifying the input number)

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Command Number 4 – Changing the password

Description

This command will change the password

Format

```
[password].4.[new password].
```

Example text message

```
oli.4.pow.
```

Parameters

Parameter	Description	Limitations
New password	This is the password that will replace the current password	It cannot be more than 3 digits in length

Notes

Once you have set this password, the new password will come into effect immediately

Powelectrics can remotely reset your Metron if you have forgotten the password. Contact Powelectrics for more information.

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Command Number 5 – Clearing the configuration

Description

This command will reset all settings on the Metron, including the system password (returns to the default password)

Format

```
[password].5.
```

Example text message

```
oli.5.
```

There are no parameters

Notes

Powelectrics can remotely reset your Metron if you have forgotten the password. Contact Powelectrics for more information.

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Command Number 6 – Requesting Configuration and Status

Description

This command will prompt the Metron upon the next Transmit Interval to send the current configuration and status **to the device that has sent the command** using SMS messaging

Format

```
[password].6.
```

Example text message

```
oli.6.
```

There are no parameters

Notes

It will only respond when the Metron reaches its next Transmit Interval

It will send the SMS message only to the device that sent the command.

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IN4MA Metron D

GSM/GPRS Telemetry Solution

Alarm Format Specification

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Important points to note

- The Metron does not use phone number identification as an authorisation method. The security for the Metron is a single three digit password.
- All scaled values are rounded to the nearest whole number.

When the Metron will send a text message

There are four possible triggers that can cause the Metron to send a text message. These are:

- **A Periodic Log** – Every time the transmit interval has elapsed, the Metron will transmit the readings from all of the sensors that are enabled
- **An Alarm** – Every time the wake up interval has elapsed and a reading passes a threshold requirement the reading in question will be transmitted
- **A Status Request** – Upon logging onto the phone network and the reception of command 6, it will transmit the status of all inputs and settings
- **Reset Confirmation** – When the unit has been remotely reset, a confirmation will be sent to the number issuing the command

Each has its own text messaging format, explained on the following pages

How the formats are described.

[and] are not literal characters, they enclose a description of what will be sent, for example:

`[state]`

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Periodic Log text message format

Description

Every time the transmit interval is elapsed, the Metron will transmit the readings from all of the sensors that are enabled. **If a particular input is not enabled, the name and reading of the input will simply be omitted.**

Formatting Modes

The formatting of a Periodic Log text message is dependant on the formatting mode in the system settings. It is not possible to operate the Metron in a combination of the formatting styles.

'User' Formatting

```
LOG: [unit name]
[input 1 name]: [input state]
[input 2 name]: [input state]
[input 3 name]: [input state]
[input 4 name]: [input state]
[temperature] C
```

'User' Example

```
LOG: pump_house
pump_1: HIGH
pump_2: LOW
pump_3: LOW
pump_4: LOW
22.125 C
```

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On Alarm text message format

Description

When a reading from an input is taken at a wakeup interval and it has passed below a threshold that has been set for that input, an alarm will be raised.
Formatting

Formatting

```
ALARM: [unit name]
[input 1 name]: [input state]
[input 2 name]: [input state]
[input 3 name]: [input state]
[input 4 name]: [input state]
[temperature] C
```

Example

```
ALARM: pump_house
pump_1: HIGH
pump_2: LOW
pump_3: LOW
pump_4: LOW
22.125 C
```

Notes

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Status Request text message format

Description

Upon logging onto the phone network and the reception of command 6, it will transmit the status of all inputs and settings. It will send the text message to the number that originally sent the command.

Formatting

```
STATUS: [unit name]
[input 1 name]: [input state]
[input 2 name]: [input state]
[input 3 name]: [input state]
[input 4 name]: [input state]
[temperature] C
```

Example

```
STATUS: pump_house
pump_1: HIGH
pump_2: LOW
pump_3: LOW
pump_4: LOW
22.125 C
```

Notes

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Reset Confirmation text message format

Description

When the unit has been remotely reset, a confirmation will be sent to the number issuing the command

Formatting

```
Reset Successful
```

Notes

If the remote reset has not been successful for any reason, there will not be a confirmation of any kind.

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